

REMARKS

Applicant has amended the specification to correct a minor typographical error. No new matter has been added.

Claims 1-5 are pending in the present application. Claim 5 has been withdrawn from consideration by virtue of the restriction requirement and subsequent election filed October 31, 2005, in which Applicant elected claims 1-4 for further prosecution.

Claim 2, drawn to cookware made according to the method of claim 1, stands rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,930,806 to Racz. As stated, claim 2 is directed to cookware made according to the method of claim 1. Amended claim 1 defines a method for manufacturing cookware which includes, in step (a), the providing of a bonded composite metal sheet of material having at least one layer of an aluminum, aluminum alloy or Alclad aluminum material bonded between layers of stainless steel. Step (b) of claim 1 provides for forming a cookware vessel of a desired configuration from the said bonded composite sheet wherein the formed cookware vessel has an edge portion exposing the aluminum, aluminum alloy or Alclad aluminum. Step (c) of claim 1 from which claim 2 depends requires that the aluminum, aluminum alloy or Alclad aluminum at the exposed edge has an Al₂O₃ coating applied thereto by micro arc oxidation.

In rejecting claim 2 over Racz, the Examiner stated that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In the present circumstances, the product defined in claim 2 is clearly different from the product disclosed by Racz. Applicant's claim 2 defines cookware made from a bonded composite sheet having at least one layer of aluminum, aluminum alloy or Alclad aluminum bonded between layers of stainless steel

wherein an exposed edge of the aluminum, aluminum alloy or Alclad aluminum has a protective coating of Al_2O_3 applied thereto. Clearly, Racz does not teach such a cookware construction. To the contrary, Racz teaches a cookware vessel 12 having a core sheet 32 formed from carbon steel which is roll plated by layers 33 and 35 of aluminum or alloy aluminum. See col. 12, lines 41-52 and Figs. 1-4 of Racz. The carbon steel core 32 of Racz is prone to rusting and, therefore, the exposed carbon steel edge thereof has a rolled over layer 42 of aluminum to protect the carbon steel edge. See Figs. 3-4 of Racz. In the presently claimed cookware of claim 2, at least one layer of aluminum, aluminum alloy or Alclad aluminum material is roll bonded between layers of stainless steel. The exposed edge of the aluminum materials has a protective Al_2O_3 layer applied thereto. No such cookware construction is found in Racz. In fact, the Racz cookware has no stainless steel layers, nor does it have a core layer of aluminum material. Clearly, the cookware of Racz does not anticipate nor render obvious claim 2. The Examiner's reconsideration is respectfully requested.

Claim 1 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Racz in view of WO 02/50343 (hereinafter "WO '343"). The Examiner states that Racz teaches a method of manufacturing cookware comprising the steps of providing a bonded composite sheet of material having at least one layer of an aluminum or aluminum alloy material, forming a cookware vessel of a desired configuration having the aluminum or aluminum alloy exposed at least an edge portion of said formed cookware vessel. The Examiner notes that Racz fails to teach the step of treating at least said exposed edge of aluminum or aluminum alloy by a micro arc oxidation process to form an Al_2O_3 coating on at least the exposed edge of aluminum or aluminum alloy whereby chemical corrosion/erosion of the exposed edge by caustic cleaning agents is prevented. The Examiner goes on to opine that WO '343 teaches the step of treating at least said exposed edge of aluminum or aluminum alloy by a micro arc oxidation process to form an Al_2O_3 coating on at least the

exposed surface of aluminum or aluminum alloy whereby chemical corrosion/erosion of the exposed surface by caustic cleaning agents is prevented. The Examiner states that this alleged teaching is supported by the Abstract of WO '343. Applicant respectfully disagrees that the Abstract of WO '343 supports this alleged teaching. In fact, the Abstract of WO '343 provides as follows:

"The invention relates to mechanical and material engineering and can be used for improving operational characteristics of surfaces of articles made of aluminium and aluminium-silicon alloys. The inventive method for coating articles made of aluminium silicon containing alloys consists of alloy pre-treatment and a micro-arc oxidation. Said alloy pre-treatment is carried out until a structure is formed in which particles of silicon-containing phases are arranged in the form of individual inclusions and/or the chains thereof in such a way that a mean distance between boundaries of the adjacent silicon-containing inclusions on the flat section of material exceeds 5% of a mean linear dimension of the inclusions. Said invention makes it possible to improve adhesion and mechanical bond between the coating and the oxidized alloy and optimize said alloy with respect to practical operating requirements. The invention also reduces power consumption."

It will be seen from the above Abstract that WO '343 merely teaches that the micro-arc oxidation process may be applied to articles "for improving operational characteristics of surfaces of articles made of aluminum and aluminum-silicon alloys". There is absolutely no disclosure or suggestion in WO '343 that the micro-arc oxidation treatment may be useful for treating the exposed edges of aluminum in cookware for the purposes of preventing attack by caustic cleaning agents. In any event, claim 1 as amended provides that the exposed edge of aluminum, aluminum alloy or Alclad aluminum material is sandwiched between layers of stainless steel. The combination of Racz and WO '343 fails

to meet the limitations of claim 1 in that, as stated above, Racz teaches a composite of carbon steel sandwiched between layers of aluminum or aluminum alloy in its cookware construction and WO '343 contains no teaching or suggestion that the micro-arc oxidation process might be useful in protecting an exposed edge of aluminum/stainless steel composite in cookware against attack by a caustic cleaning agent. Reconsideration and removal of this rejection is respectfully requested.

Claims 3 and 4 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Racz and WO '343 as applied to claim 1 and further in view of U.S. Patent No. 3,490,126 to Miller. The Examiner states that Racz and WO '343 teach all the limitations of the claims except that the bonded composite sheet of material includes at least one layer of stainless steel and the step of masking the stainless steel prior to the treating step of step (c) in claim 1. According to the Examiner, Miller allegedly teaches that the bonded composite sheet of material includes at least one layer of stainless steel and the step of masking the stainless steel prior to the treating step, citing col. 2, lines 23-27. This passage of Miller provides as follows:

"In the embodiment shown in FIG. 1, body portion 12 is formed of a tri-layer material including, at its inner surface, a thin layer 16 of nickel; at its outside, a layer 18 of heat conductive material; and sandwiching therebetween, a layer of stainless steel 20."

The cookware vessel shown in Fig. 1 of Miller comprises a three-layer composite having a thin layer 16 of nickel on the outside, a layer 18 of heat conductive material, and sandwiched therebetween a layer of stainless steel 20. The heat conductive layer 18 is copper or copper alloy or low carbon steel, see col. 2, lines 38 and following. Miller teaches nothing with respect to masking stainless steel prior to the treating step (c) in claim 1. As provided for in the present specification in paragraph [0022] on page 5, the exterior stainless steel layers of the cooking utensil are protected from the electrolyte during

Appl. No. 10/804,813
Amdt. dated March 14, 2006
Reply to Office Action of 11-16-2005
Attorney Docket No. 916-043762

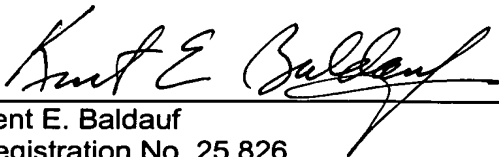
the micro arc oxidation process by rubber masking to protect the stainless steel metal against chemical attack by the electrolyte. No such masking is taught by Miller, nor would masking be expected, since the product of Miller is not exposed to any treatment let alone micro arc oxidation as set forth in step (c) of claim 1. In fact, the composite cooking vessel of Miller contains no aluminum or aluminum alloy or Alclad aluminum materials therein for micro-arc oxidation treatment. It should be pointed out that the stainless steel layer of Miller, layer 20, forms the core of the three layer composite, which is not at all equivalent to the "masking" claimed in the present application. The present invention sets forth one embodiment in which the stainless steel layers are on the outer surfaces of the aluminum, aluminum alloy or Alclad aluminum material. Miller does not contain any aluminum layer, and it would be not at all a candidate for micro arc oxidation treatment. Accordingly, Miller does not teach anything of relevance with respect to the present invention. The Examiner's reconsideration is respectfully requested.

The Examiner's reconsideration and favorable action are respectfully requested in light of the amendments made herein taken with the above remarks. Favorable action with respect to claims 1-4 is earnestly solicited.

Respectfully submitted,

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